IMPEDIMENTS TO COLLABORATION FOR ACHIEVING ENVIRONMENTAL SUSTAINABILITY THROUGH ECOSYSTEM RESTORATION

Presentation

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ISSUES:

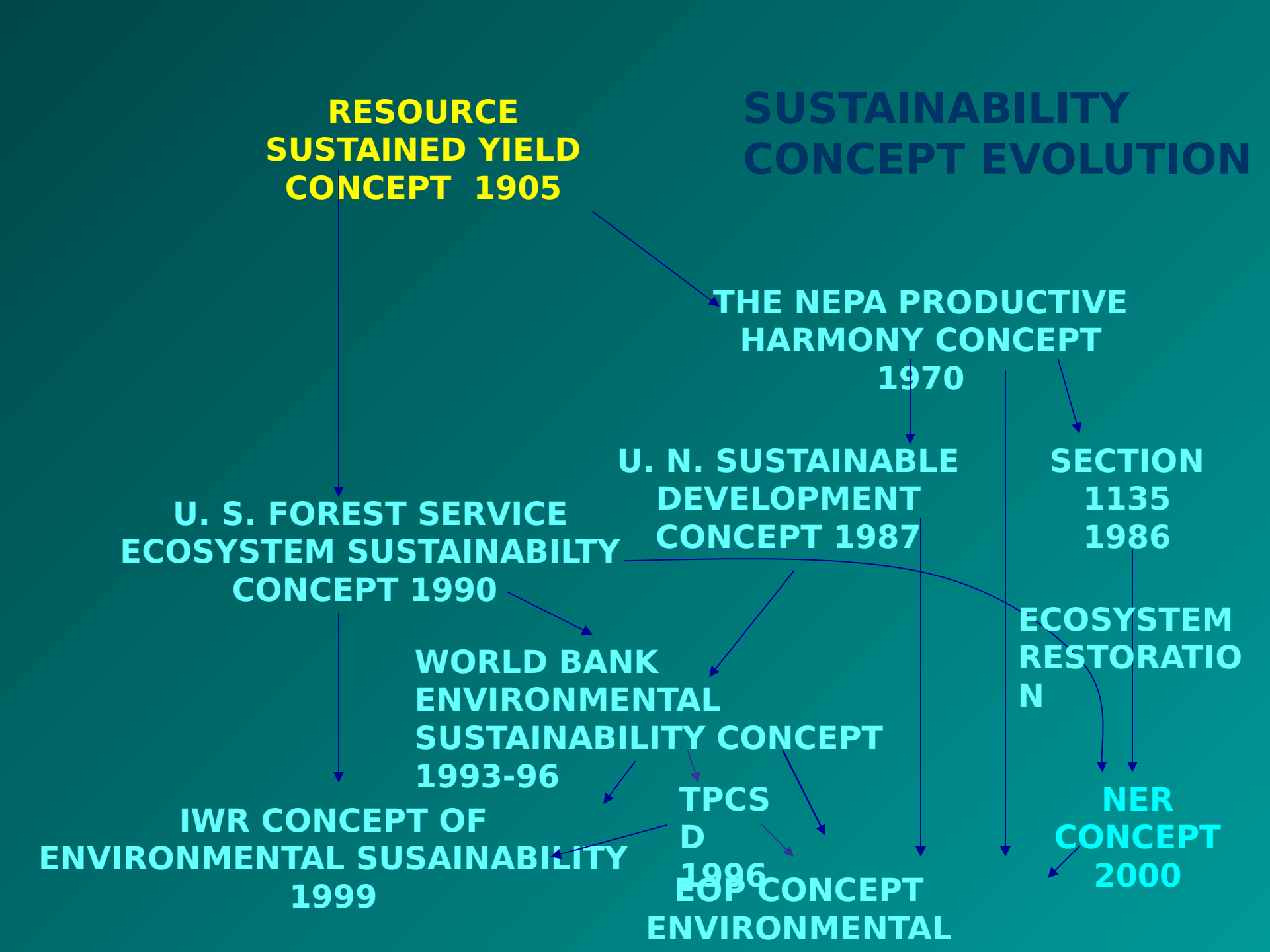
- INCREASING DEMANDS ON SCARCE RESOURCES
- INCREASED REGULATION—ESPECIALLY ENVIRONMENTAL
- GROWING NUMBER OF CONFLICTING & FRAGMENTING AUTHORITIES
- GROWING NUMBER OF STAKEHOLDERS/COLLABORATORS
- COMPLEX EVOLUTION OF ENVIRONMENTAL POLICY
  - ENVIRONMENTAL SUSTAINABILITY OBJECTIVE IS UNCLEAR
  - HOW RESTORATION RELATES TO SUSTAINABILITY IS UNCLEAR
  - HOW PROGRAM PRIORITIES ARE SET IS EVOLVING
- PARTNERS/COLLABORATORS OFTEN HAVE DIFFERENT PRIORITIES THAT ARE ACCENTUATED BY UNCLEAR OBJECTIVES

HOW CAN SUCCESS BE MEASURED AGAINST VAGUELY STATED SUSTAINABILITY AND RESTORATION OBJECTIVES ?

PRESENTATION OBJECTIVES

- SUSTAINABILITY CONCEPT EVOLUTION
  - **CORPS POSITION/CONCEPTS**
  - **COLLABORATOR POSITIONS/CONCEPTS**
- DIFFERENCES, COMMONALITY & TRENDS

SUSTAINABILITY CONCEPT EVOLUTION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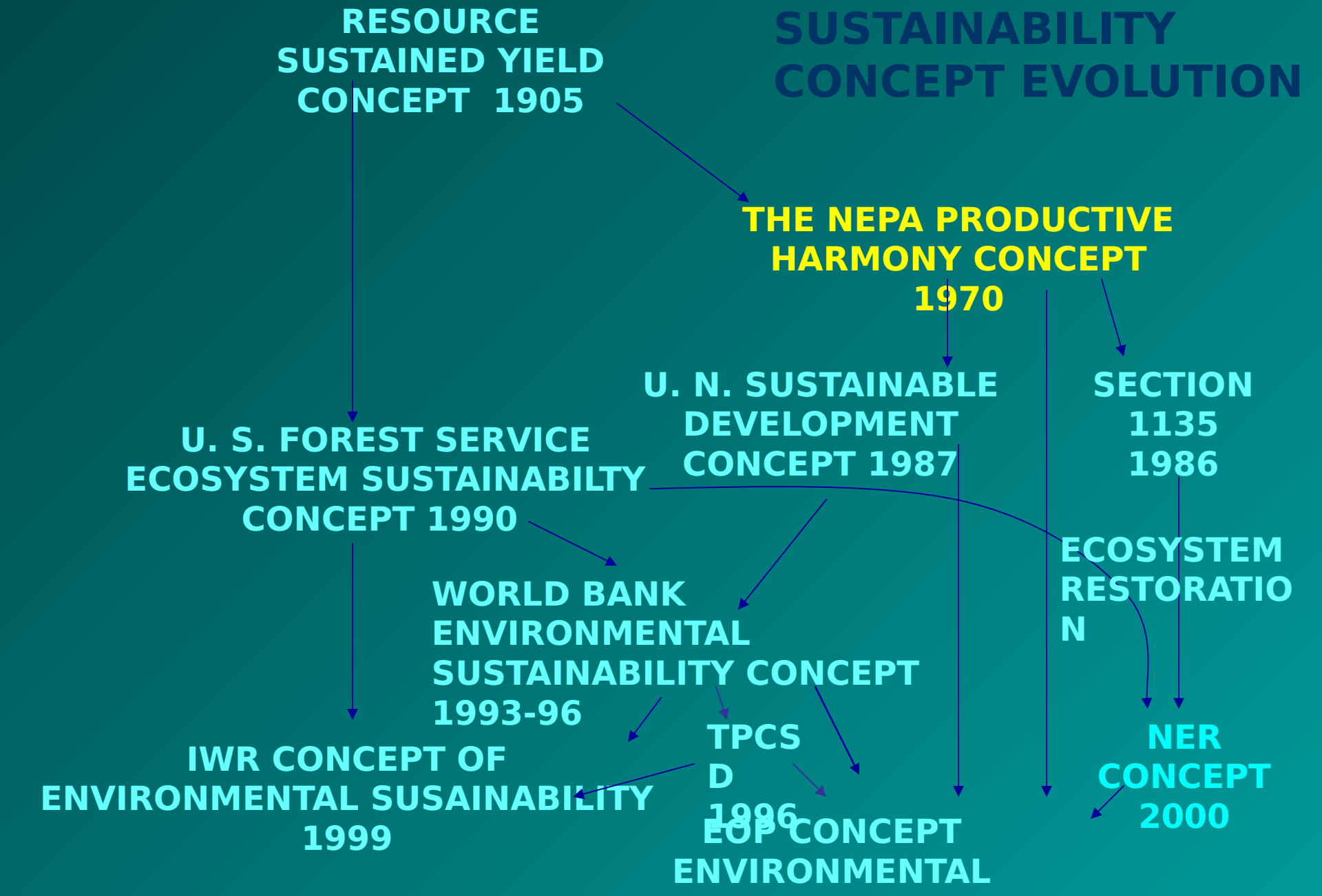
SUSTAINED YEILD CONCEPT

- RENEWABLE RESOURCES CONCEPT
- MOTIVATED BY THREAT OF LOST MGT OPTIONS
- CONSERVATION PHILOSOPHY
  - GREATEST GOOD FOR GREATEST NUMBER IN LONG RUN
- COMMODITY RESOURCES ORIENTED
  - TIMBER
  - LIVESTOCK
  - FISHERIES
  - WILDLIFE
  - WATER
- MAXIMUM SUSTAINED YEILD
  - CONSIDERED SUPPORT ECOSYSTEM FROM THIS PERSPECTIVE
  - DID NOT CONDONE LOSS OF RESOURCE OPTIONS

SUSTAINABILITY CONCEPT EVOLUTION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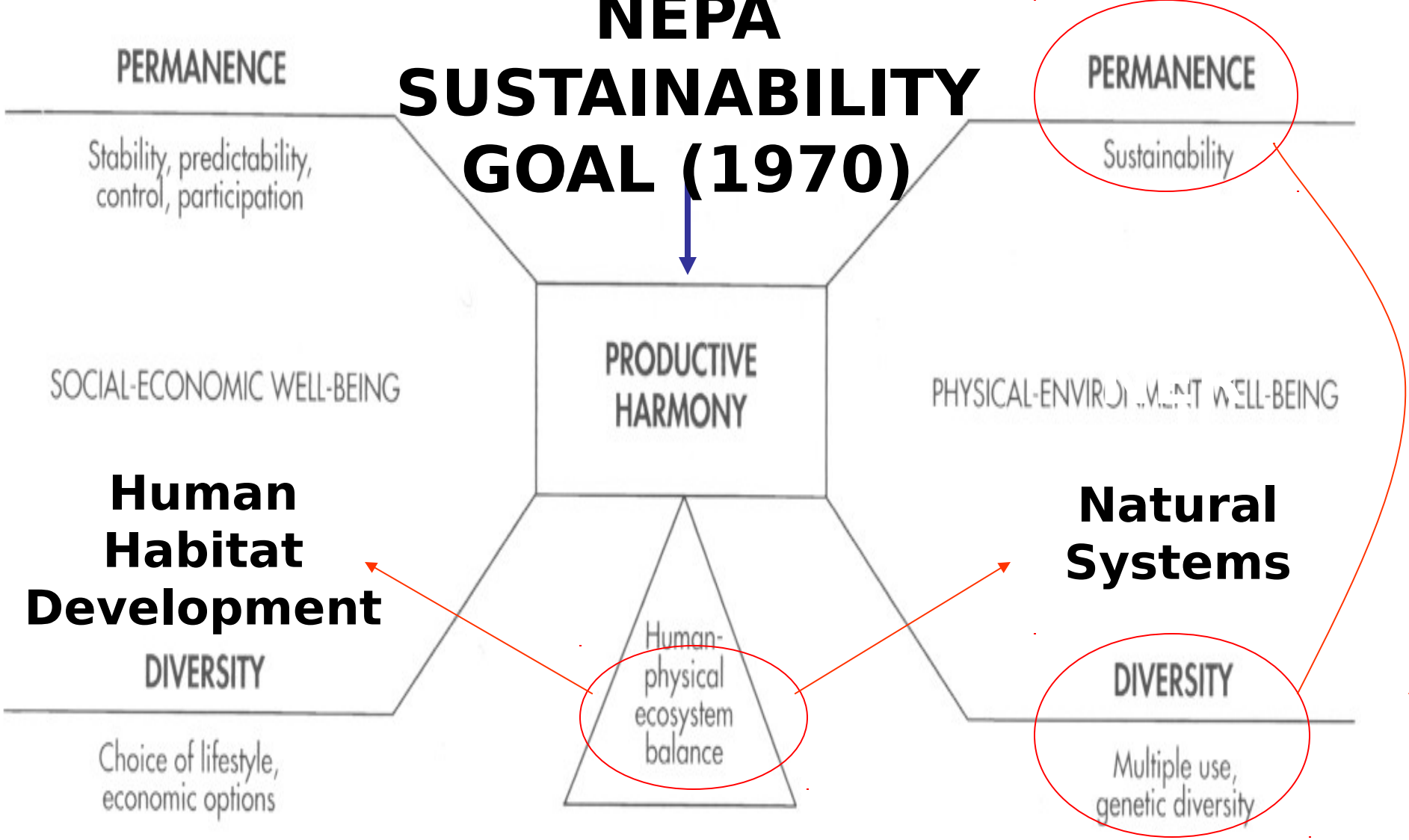
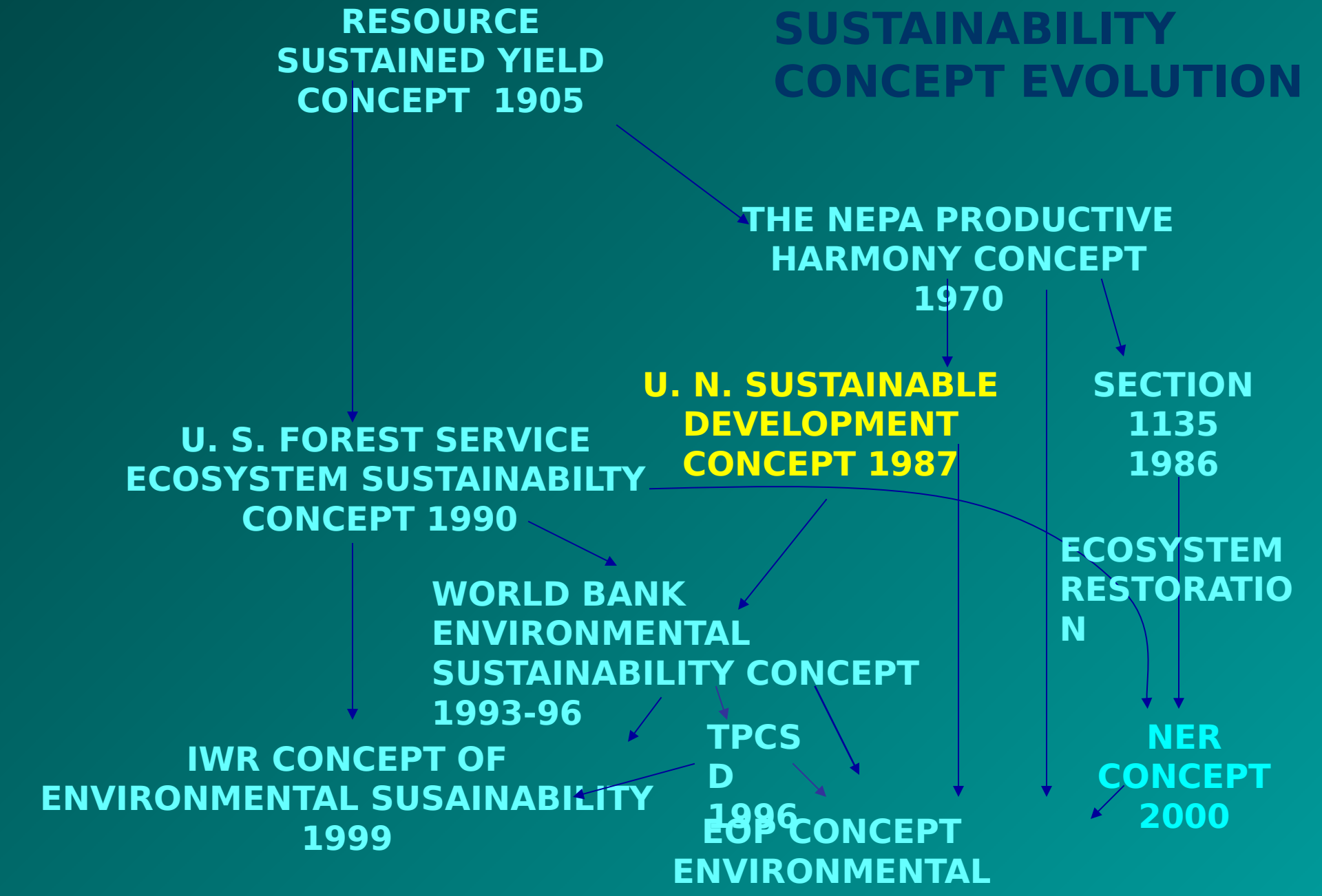


NATIONAL ENVIRONMENTAL POLICY ACT

AVOID IRREPLACEABLE ENVIRONMENTAL LOSS

SUSTAINABILITY CONCEPT EVOLUTION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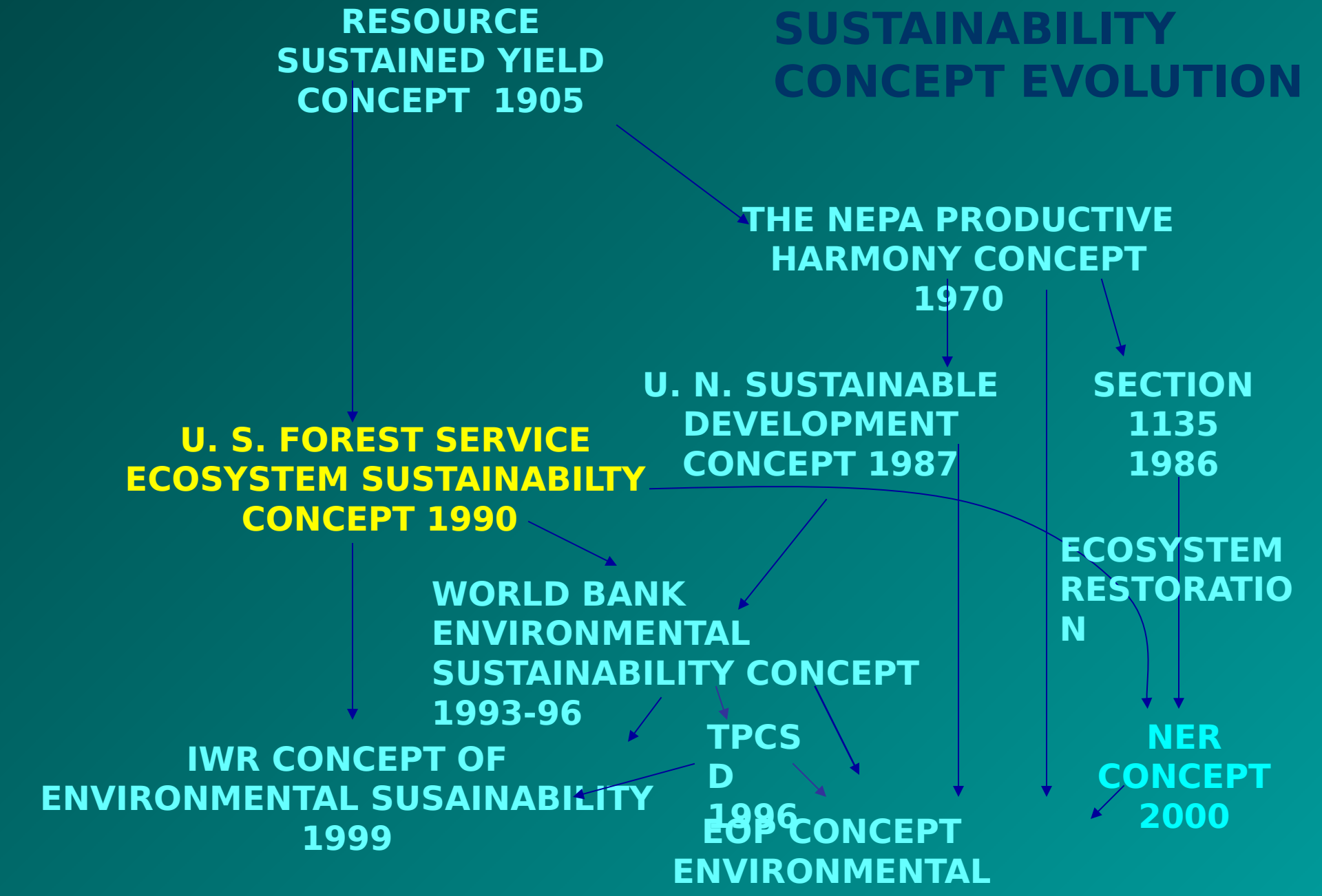
WORLD COMMISSION ON DEVELOPMENT & THE ENVIRONMENT

- "OUR COMMON FUTURE" (BRUNDTLAND REPT)
- USA REPRESENTED BY WILLIAM RUCKELSHAUS
- SUSTAINABLE DEVELOPMENT—
  - "MEETS THE NEEDS OF THE PRESENT WITHOUT COMPROMISING THE ABILITY OF FUTURE GENERATIONS TO MEET THER OWN NEEDS"
  - REQUIRES ECONOMIC GROWTH WHERE ESSENTIAL NEEDS NOT MET
  - ENSURES EQUITABLE OPPORTUNITIES FOR ALL
  - DOES "NOT ENDANGER THE NATURAL SYSTEMS THAT SUPPORT LIFE"
  - "THE LOSS OF…SPECIES CAN …LIMIT THE OPTIONS OF FUTURE GENERATIONS"
  - ADVERSE IMPACTS "ARE MINIMIZED TO SUSTAIN THE ECOSYSTEM'S OVERALL INTEGRITY"

SUSTAINABILITY CONCEPT EVOLUTION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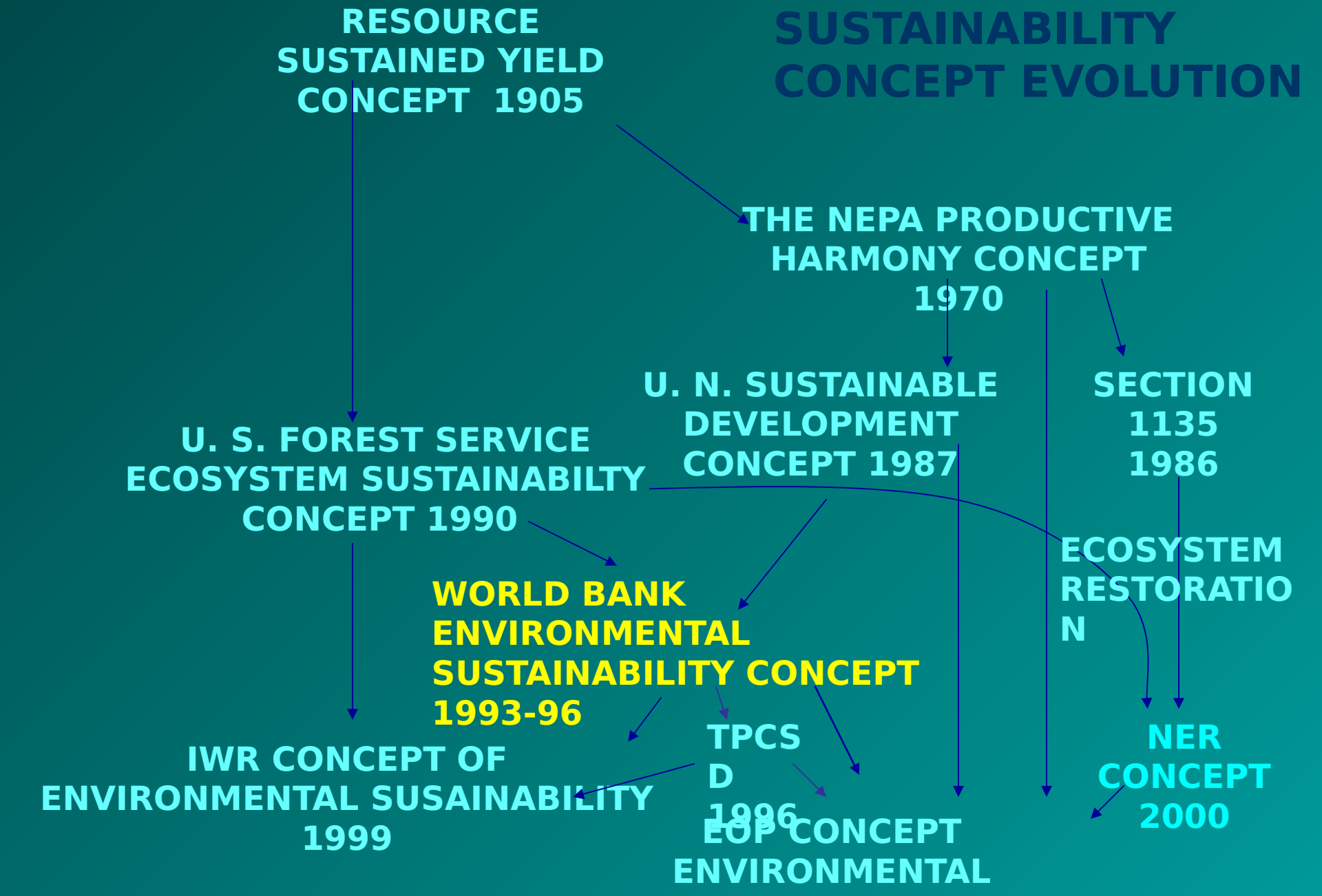
ECOLOGICAL SUSTAINABILITY

- BROADENED MANDATES BROADENED PERSPECTIVE
- A HOLISTIC ECOSYSTEM APPROACH EVOLVED
- ECOSYSTEM MANAGEMENT FOR:
  - ECOSYSTEM INTEGRITY & SUSTAINABILITY
  - CONSISTENT FLOW OF GOODS AND SERVICES
    - SOCIAL SUSTAINABILITY
    - ECONOMIC SUSTAINABILITY
- LED TO ECOSYSTEM APPROACH MOU IN 1995
- 17 FEDERAL AGENCIES SIGNED INCLUDING USACE
- COLLABORATION IS IMPORTANT ASPECT

SUSTAINABILITY CONCEPT EVOLUTION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WORLD BANK CONCEPTS

ECONOMIC OBJECTIVES

- GROWTH
- EQUITY
- EFFICIENCY

Economic Sustainability

Human and human-made capital

SUSTAINABLE DEVELOPMENT

Environmental Sustainability

Natural Capital

Social Sustainability

Social / Moral Capital

ECOLOGICAL OBJECTIVES

- ECOSYSTEM INTEGRITY
- BIODIVERSITY
- CARRYING CAPACITY

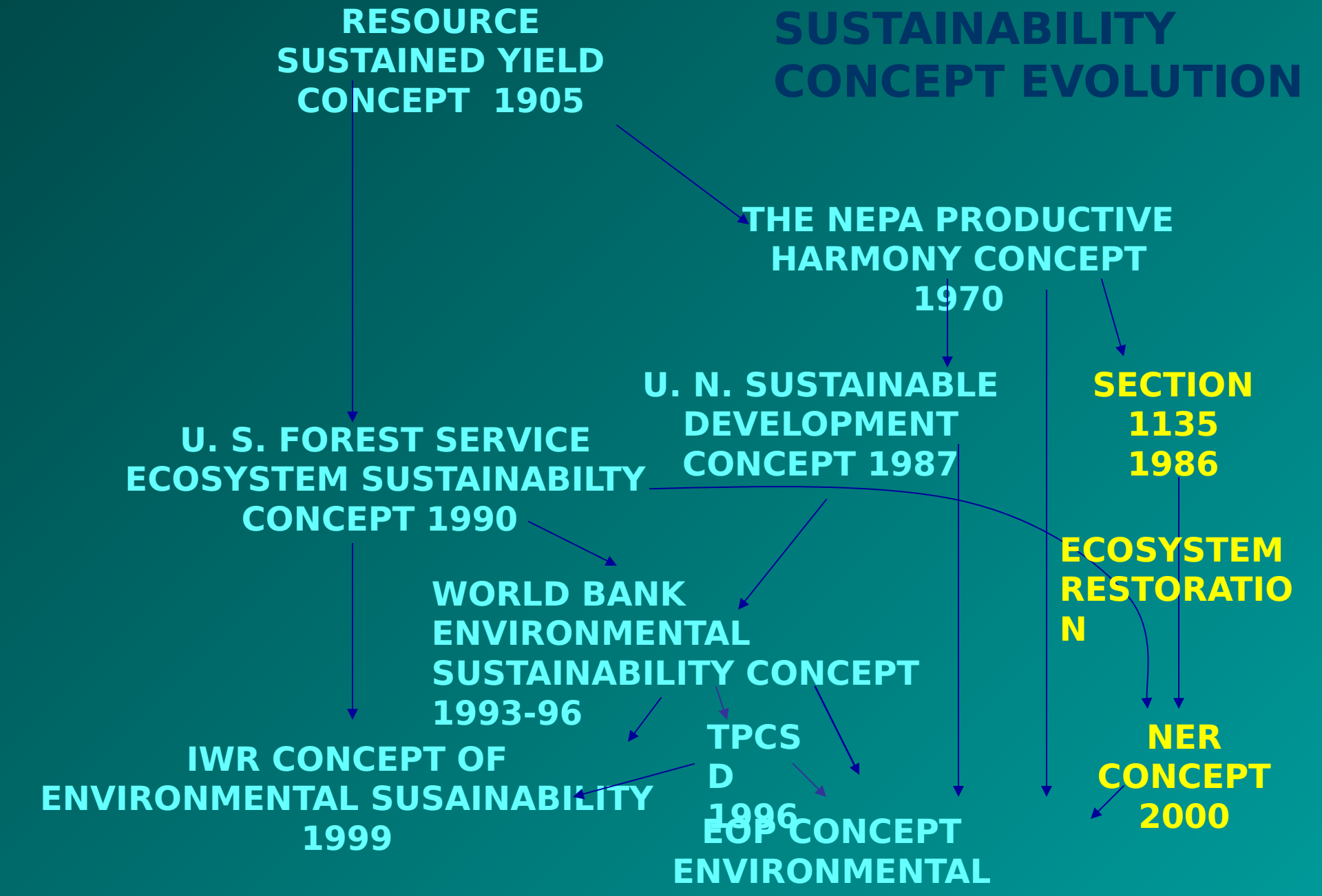
SOCIAL OBJECTIVES

- EMPOWERMENT
- SOCIAL MOBILITY
- SOCIAL COHESION

BASIC CONDITIONS FOR ENVIRONMENTAL SUSTAINABILITY

- OUTPUT RULE: NO UNACCEPTABLE DEGRADATION OF IMPORTANT SERVICES
- INPUT RULES:
  - CONSUMPTIVE USE OF RENEWABLE RESOURCES WITHIN REGENERATIVE CAPACITY (SUSTAINED YIELD)
  - DEPLETION RATES OF NONRENEWABLE RESOURCES EQUALED BY REPLACEMENT WITH RENEWABLE SUBSTITUTES
- RESULT—NATURAL CAPITAL MAINTAINED

SUSTAINABILITY CONCEPT EVOLUTION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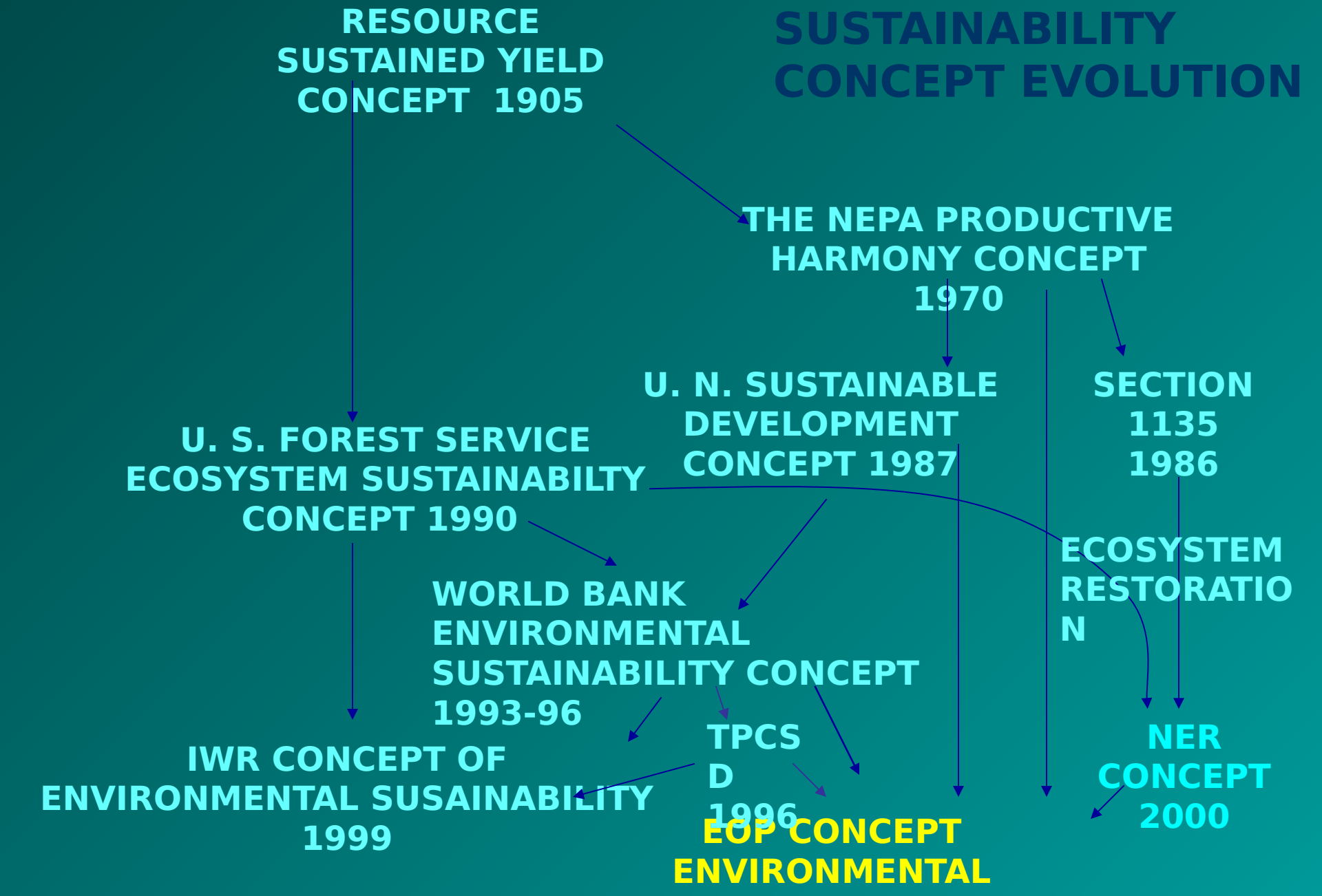
NATIONAL ECOSYSTEM RESTORATION (NER):

- A NATIONAL PLANNING OBJECTIVE LIKE NED
- RESTORATION PROJECT OUTPUTS CONTRIBUTE TO NER
- CONTRIBUTIONS ARE LIMITED TO ECOLOGICAL RESOURCES
  - ARE NATURAL ECOSYSTEM STRUCTURE, FUNCTIONS & DYNAMIC PROCESS
  - ARE FUNCTIONS OF HABITAT IMPROVEMENT
  - ARE NOT TO BE NED OR MEASURED IN DOLLARS
  - INDICATORS OF SUCCESS INCLUDE
    - GREATER DIVERSITY
    - LESS RARE SPECIES
    - GREATER CONNECTIVITY

- BEST ADMINISTERED IN JOINT PURSUIT OF NED (MULTIPURPOSE PROJECT)
- NO EXPLICIT MENTION OF--
  - ECOSYSTEM INTEGRITY
  - BIODIVERSITY
  - CARRYING CAPACITY
  - NATURAL CAPITAL

SUSTAINABILITY CONCEPT EVOLUTION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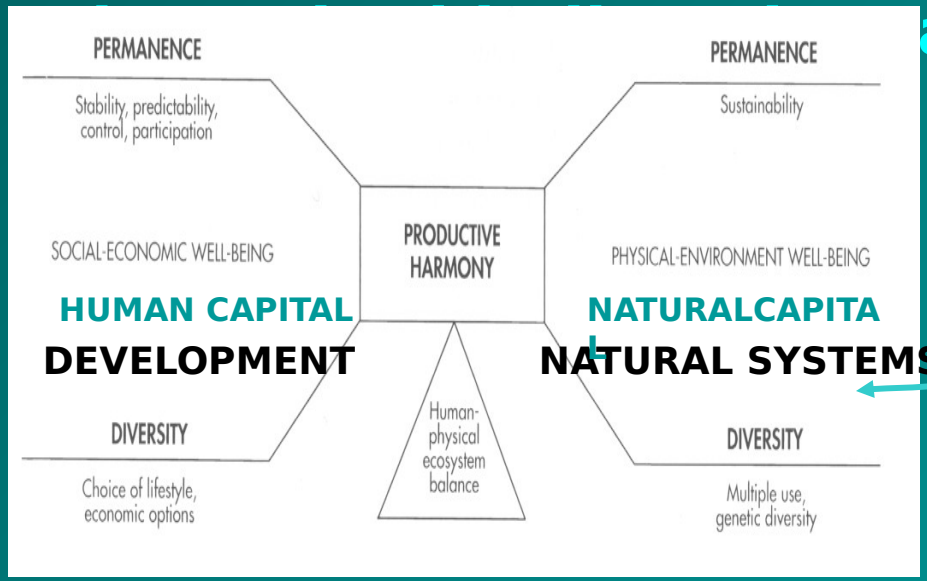
ENVIRONMENTAL OPERATING PRINCIPLE

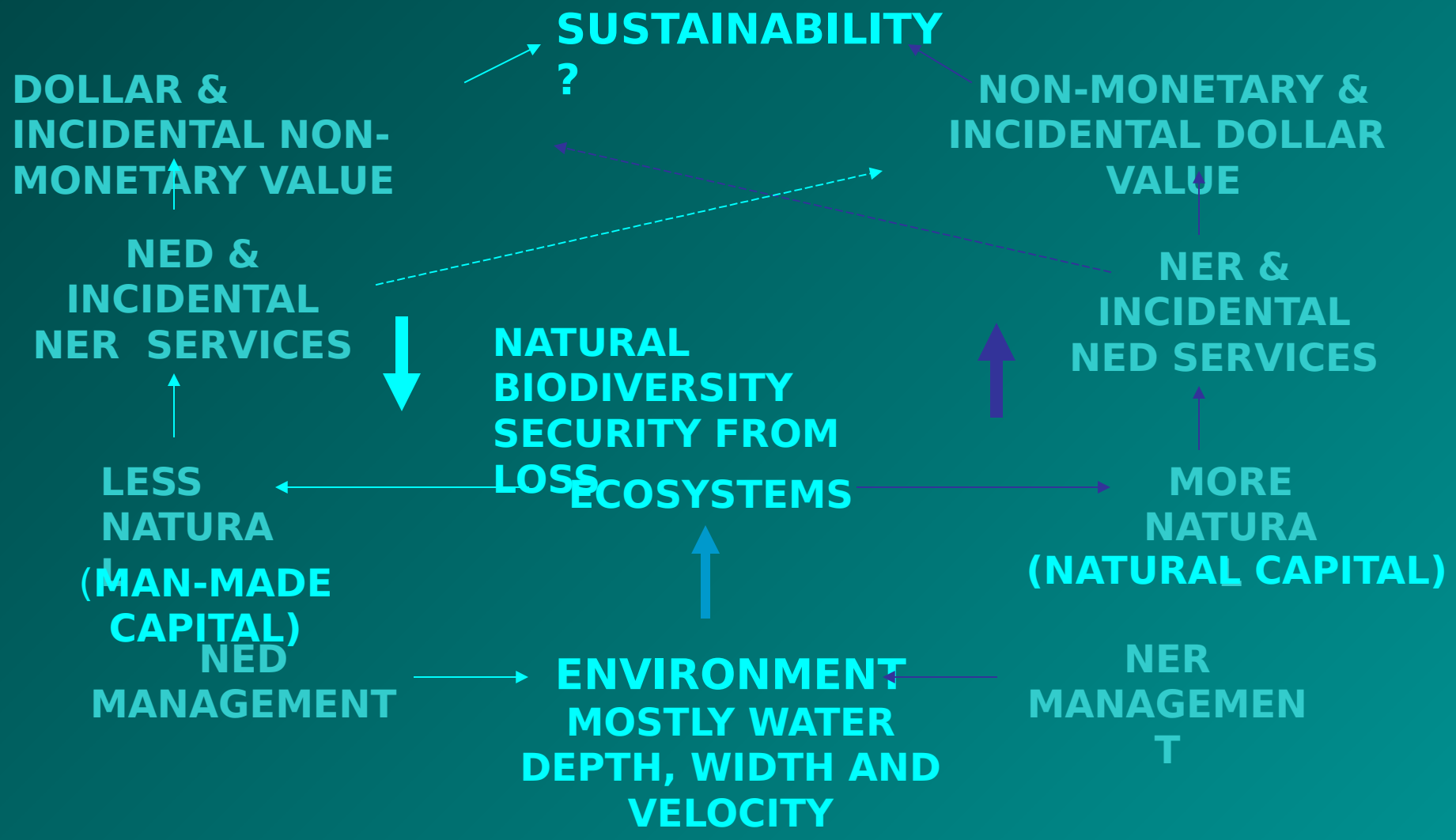
GOAL RELATED

1. **Strive to achieve Environmental Sustainability**

3. **Seek balance and synergy among human development activities and natural systems (PRODUCTIVE HARMONY?)**

arrying capacity?





THE FEDERAL PLANNING OBJECTIVE SEEKS BALANCE BETWEEN NED AND NER BENEFITS IN MULTIPURPOSE

COLLABORATOR POSITIONS:

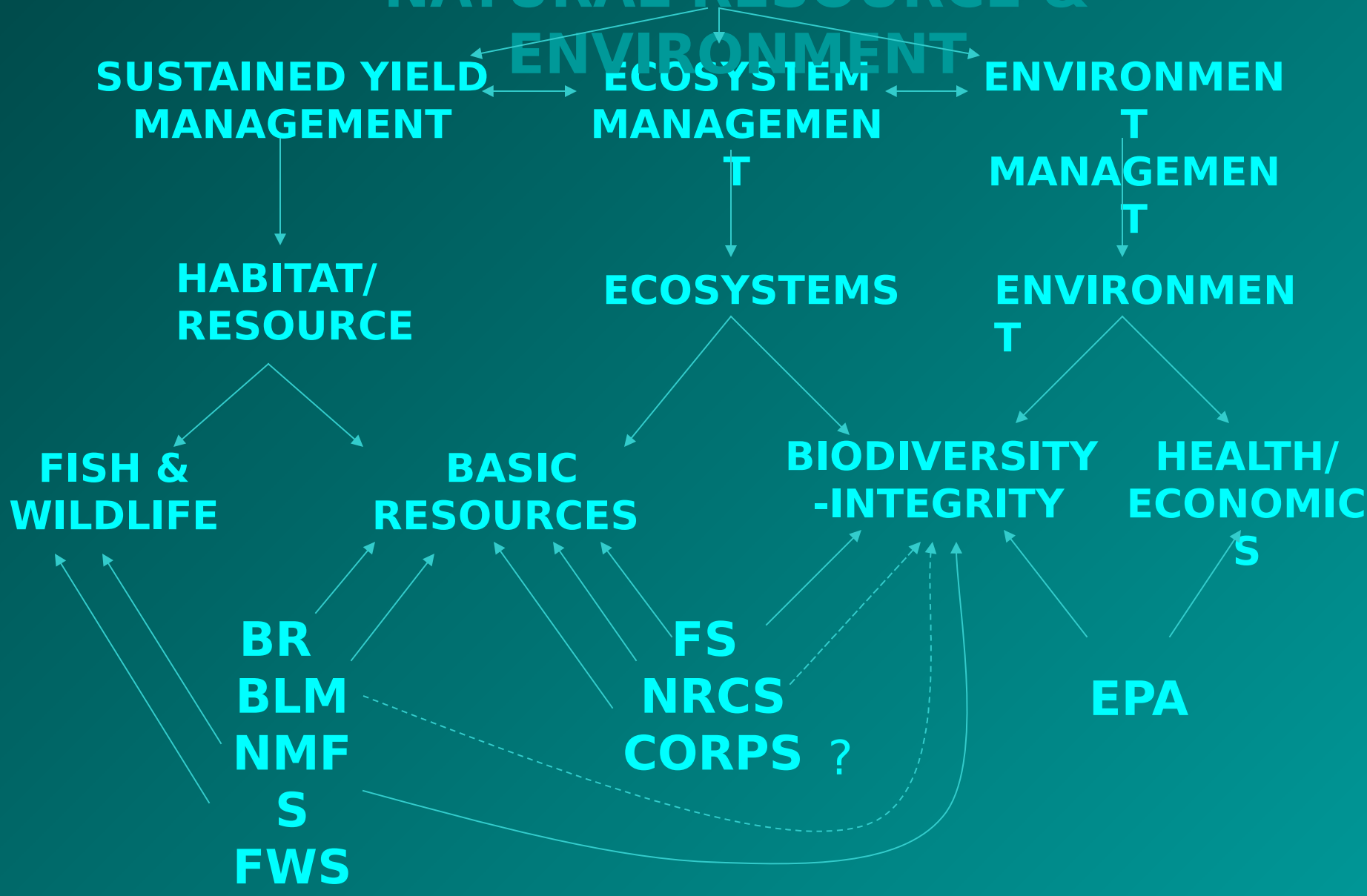
GOVERNMENT

- **USACE: Balance development and natural systems**
- **FS: Sustain forest ecosystem integrity and dependent social and economic well being**
- **EPA: Protect environment to sustain human health, economic activity, and nature.**
- **FWS: Sustain Fish, wildlife & plant populations**
- **NMFS: Sustain the use of (fishery) resources**

NON-GOVERNMENT

- **TNC: Preserve biological diversity**
- **Amer Riv: Restore and protect fish and wildlife**
- **NFWF: Sustain fish, wildlife and plants**
- **AFS: Sustain fishery resources**

ECOSYSTEM APPROACH TO NATURAL RESOURCE & ENVIRONMENT



PUBLIC NATURAL RESOURCE MANAGEMENT POLICY TRENDS

UNLIMITED NATURAL RESOURES

LAIZEE FAIRE POLICY

MAXIMIZE SUSTAINED YIELD OF SPECIFIC RESOURCES

CONSERVATION POLICY—MINIMUM COLLABORATION

REGULATE DAMAGE TO NATURAL ENVIRONMENT & ENDANGERED RESOURCES

ENVIROMENTAL PROTECTION POLICY—"COLLABORATION" BY LAW SUIT

TAKE AN ECOSYSTEM APPROACH TO RESOURCE MANAGEMENT WITH ECOSYSTEM/ ENVIRONMENTAL INTEGRITY & SUSTAINABILITY THE DESIRED GOAL.

EVOLVING INTEGRATED RESOURCE MGT POLICY SEARCHING FOR COLLABORATION AROUND COMMON GOALS

FINAL OBSERVATIONS:

GENERAL

- FEDERAL POLICY PROMOTES PROTECTION OF RESOURCE OPTIONS
- FUTURE OPTIONS ARE NOT TRADED FOR DEVELOPMENT
- ECOSYSTEM APPROACH IS ACCEPTED BY GOV & NGOs
- FOCUS OF APPROACH VARIES ACCORDING TO MISSIONS
- SUSTAINING ECOSYSTEM INTEGRITY IS BECOMING THE UNIVERSAL ENVIRONMENTAL SUSTAINABILITY OBJECTIVE
- BIODIVERSITY IS THE MEASURE OF ECOSYSTEM INTEGRITY

FINAL OBSERVATIONS:

THE CORPS

- CORPS POLICY SHOWS A SIMILAR EVOLUTION
  - YET TO BE INTEGRATED AROUND SUSTAINABILITY
  - OR AN ECOSYSTEM INTEGRITY/DIVERSITY OBJECTIVE

- “BALANCING” DEVELOPMENT AND NATURAL SYSTEMS MAY IMPLY TRADEOFFS –BUT OF WHAT?

- WHAT IN NATURAL SYSTEMS MUST BE SUSTAINED?

- SHOULD INTEGRITY BE THE NER OBJECTIVE?

- SHOULD IT BE MEASURED BY THE SECURITY OF THE NATION’S BIODIVERIITY?